# Kolloquium über Reine Mathematik

## Einladung zu einem Vortrag

# Dienstag, 21. Mai 2019

## 17 Uhr s.t., Geom H4

# Prof. Dr. Lynn Heller
## (Leibniz Universität Hannover)

### *Isothermic Constrained Willmore Tori in the 3-Sphere*
### (joint work with S. Heller and Ch. B. Ndiaye)

Abstract:

We want to find the optimal realization of a given compact Riemann surface M in the 3-space. In this context optimal means to minimize or to be a critical point of the Willmore functional, which measures the roundness of the surface, while preserving the Riemann surfaces structure. Such surfaces are called constrained Willmore. For isothermic surfaces, those possessing a conformal curvature line parametrization, the constraint is degenerate, leading to singularities of the moduli space of all solutions. In my talk I classify all such singular points, when M is of genus one. Moreover, I show that there exists a family of isothermic constrained Willmore tori that locally minimize the Willmore energy.

**Vor dem Vortrag (ab 16.30 Uhr) stehen im Raum 327 Kaffee und Tee bereit.**